

REMARKS

Applicant's representative respectfully requests a personal interview with the Patent Examiner before the Examiner issues any substantive Office Action in connection with this application. Applicant's representative will contact the Examiner in about one month to request the Interview. Of course, the Examiner may contact applicant's representative before that time if the Interview must be conducted earlier in order to accommodate the schedule of the Examiner.

Claims 28-39 are pending in the above-identified application. Support for new claims 28-39 is found, for example, at pages 7-15 of the specification, as well as in Figures 2A, 2B, 2C, 2D, 3A, 3B and 5A.

Issues Raised in Previous Office Action

Various claims of the present application which were previously pending, and have now been cancelled, were rejected over the following references:

Sando '324 (USP 4,437,324);  
Goffetre '100 (USP 5,196,100);  
Kashiwaya '792 (USP 5,595,792); and  
Edgerton '970 (USP 4,389,970).

Based on the discussion below, it is evident that significant patentable distinctions exist between the present invention and each of these documents.

#### Present Invention

The present invention, as recited in new claim 28, is directed to an apparatus for continuous plasma polymerization. The apparatus includes a source roller which feeds a metallic substrate into a polymerization chamber in which plasma polymerization is conducted. The metallic substrate is electrically connected to an electrical power source and, together with an electrode in the polymerization chamber, serves as a counter electrode such that plasma gas introduced into the chamber forms a plasma for deposition on the surface of the metallic substrate. This is evident from the discussion in the specification, such as for example the description regarding various embodiments at pages 7-14 of the specification with reference to the drawings, including Figures 2A - 2D, 3A and 3B.

#### Distinctions Between Present Invention and the Cited Documents

Sando '324 discloses an apparatus for treating a cloth continuously with the use of low-temperature plasma, wherein a

reactor **1** is provided with a cloth inlet **3** which receives a cloth **2** for treatment as shown in Figure 1. Cloth guide rolls **7** are provided up and down zigzag in two stages in the reactor for transporting the cloth.

Goffetre '100 discloses a process for the continuous metallization of a spread fibre sliver. A vacuum enclosure **10** has a chamber **16** for supplying the spread fibre sliver to be metallized, and a chamber **18** for metallizing the sliver as shown in the figure. On a spool **28** is wound a spread fibre sliver **30**. In the metallization chamber **18**, the spread fibre sliver **30** travels vertically between two rotary magnetron cathodes **40a**, **40b**.

Kashiwaya '792 discloses a method and apparatus for producing a magnetic recording medium. A thin film of a predetermined component is formed by a plasma CVD method on a surface of a "long web-like substrate" **21**, which is a constituent element of a magnetic tape. The apparatus **20** includes a vacuum chamber **22**, a plasma stream generating device **24**, a gas supply **25** for supplying a reactive gas, and a substrate transporting device **26** for running the substrate **21** within the vacuum chamber **22** as shown in Figure 1. The apparatus also includes an electric field generating device **27**. As described in column 10, lines 46-52, the web-like substrate **21**

may be formed from a 2,000 angstrom thick Co-O layer on a PET base having a thickness of 5-20 microns by means of vapor deposition.

Edgerton '970 discloses an apparatus for regulating substrate temperature in a continuous plasma deposition process. A substrate **10**, which may be a flexible metallic foil as noted at the bottom of column 2, is wound through a system as shown in Figure 1A from a feed reel **12** to a takeup reel **16**, and is additionally guided by means of intermediate idler reels **20**, **22**, **24** and **26**. Each of the chambers **28**, **30** and **32** through which the substrate **10** is advanced includes a lamp holder **44** for retaining a plurality of quartz infrared lamps on one side of the substrate **10** and a cathode **46** (for energizing a plasma) on the other side of the substrate **10**.

All of Sando '324, Goffetre '100, Kashiwaya '792 and Edgerton '970 fail to disclose an apparatus for continuous plasma polymerization which includes a metallic substrate that is electrically connected to a power supply and serves as a counter electrode, as in the apparatus of the present invention. Sando '324 relates to an apparatus for treating a "cloth" which is not equivalent to a metallic substrate. All of Goffetre '100, Kashiwaya '792, and Edgerton '970 fail to disclose or suggest an apparatus wherein the substrate is electrically connected to a power supply and serves as a counter electrode as in the present

invention. Consequently, significant patentable distinctions exist between the present invention and all of these cited references.

Conclusion

If any questions arise regarding the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

Andrew D. Meikle, #32,868

ADM:gmh  
0630-2039PUS1

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000